

extending up the arm. I was struck with the excessively sour smell of the perspiration in the hand, resembling sour curds, just as putrefaction is commencing—a state of the cutaneous secretion which obtains in this form of nervous affections. She complained of tenderness along the cervical vertebræ. A grain of strychnia, divided into fifteen pills, one to be taken three times a day, was prescribed, and a succession of mustard-poultices along the spine. I directed the hand to be well washed with soap and water, and ordered an antacid diet. Under this plan of treatment her general health underwent a manifest improvement, and when the hand opened at the expiration of the last three weeks of its closure, she ceased to complain of her head, which she had never done on former occasions.

The strychnia, which had been continued fifteen days, was omitted when the hand opened, and the decoction of polygala senega, with sulphate of magnesia, was substituted, with the use of the vapour bath. These means were used for a month. Finding there was no return of closure of the hand nor of headache, that the tenderness of the cervical vertebræ was no longer felt, and that her health in every respect was good, the remedies were discontinued, and she has remained perfectly well. This case exhibits the utility of strychnia in small doses as an anti-neuralgic medicine. Six cases, showing its successful operation, were published by me in the *Medical Gazette*.

But the chief object in relating the case of Mary Ann H— was, to show a singular instance of periodical nervous affection. If it were not for the *medicina perturbatrix*, generally resorted to in diseases of the nervous system, I believe that their periodical character would be much more frequently manifested, from the most violent mania to an ordinary toothach. The term lunacy, anciently applied to the former, and face or brow ague, when the pain was reflected from the exposed nerve of a carious tooth, along some superficial branch of the fifth pair of nerves, to the latter, may be traced to the popular observation of their periodical nature.

The question arises—How can the extraordinary regularity of the paroxysms, in the case in point, be explained—three weeks of head-affection, with perfect use of the hand, and three weeks of rigid closure of the hand, with perfect freedom from head-affection, and that for a term of six years? The only explanation that can be offered is perfectly hypothetical, as every explanation of the morbid phenomena of the nervous system must be, so long as we remain ignorant of the nature, properties, and mode of distribution of the nervous energy. The same law of the animal economy which regulates the circulation of the blood seems to determine the distribution of the nervous energy. The same causes which disturb the equality of the circulation also disarrange the nervous influence. By the fall on the head, the upper part of the spine received the principal shock, or *contre-coup*, evidenced by the tenderness in that part. The circulation and innervation were disturbed, an accumulation of blood and nervous energy, or plethora, in the cervical portion of the spinal cord, ensued, which was periodically relieved by the spasmodic closure of the hand. That the vapour-bath was of service in promoting an equal distribution, both of blood and of nervous energy, after the last paroxysm, I think must be admitted; and that to its use the prevention of the recurrence of the closure of the hand must be ascribed.

The *modus operandi* of the strychnia, like that of the galvanic and electric fluid, probably is by exhausting the nervous energy, and thus promoting the relaxation of spastic rigidity; for, in cases of tonic and clonic spasm, or *distentio nervorum*, these medicinal agents are more successful than in cases of paralysis or *resolutio nervorum*. This case also shows the value of the vapour-bath as a remedy in neuralgia, and the importance of an antacid diet; for in the treatment of these frequently intractable cases, every remedy has been unsuccessful, unless a total abstinence from fruit, wine, beer, vinegar, and vegetable acids of all kinds, has been strictly observed.

Montague-street, Russell-square, July, 1845.

CLINICAL CONTRIBUTIONS FROM PRIVATE PRACTICE.

POISONING BY PRUSSIC ACID.

By JAMES HICKS, Esq. Surgeon, Newington.

ON Friday, the 21st of March, I was sent for, in great haste, to see a person who was described as being taken suddenly seriously ill. On my arrival, I found the patient a young female, about twenty-two years of age, and of very short stature. She was lying on her back perfectly insensible, and the face so greatly congested as to be almost purple; the teeth were clenched, and foam was issuing from the mouth; the breathing was slow, laborious, and at

long intervals; the pulse gone, and the action of the heart but feebly to be felt; the eyelids were partly closed, and the eyes appearing as if pushed forward between them, while the pupils were dilated, and quite insensible to the stimulus of light; and the whole body under such strong spasmodic action, that the head seemed buried between the shoulders, and the arms nearly turned round by the pronator muscles.

Such were the symptoms, as nearly as I can recollect, when first I arrived; and from the bloated state of the countenance, together with the foaming at the mouth, my first impression was, that the girl was labouring under some form of epilepsy; but upon finding the patient pulseless, and the heart scarcely to be felt, I naturally looked for some other cause, when I found, on inquiry, that the symptoms had come on directly after taking a dose of medicine, which I ascertained, by smelling, to contain prussic acid. This led me to the conclusion that the symptoms were produced by an over-dose of that poison, when I, in conjunction with Mr. Watson, who was also present, immediately resorted to those means recommended in such cases, such as cold affusion to the head, applying ammonia to the nostrils, and in endeavouring to give brandy and ammonia internally. As, however, the muscles of deglutition were so fully under the influence of the poison, I think but a very small quantity (if any) passed into the stomach, notwithstanding every exertion was made, by irritating the fauces, to stimulate those muscles to action. Our efforts were, however, perfectly useless, as the breathing became gradually slower, and in less than ten minutes after our arrival the patient died; death appearing to be caused by the perfect inability of the sufferer to produce inspiration, from the muscles of the chest, as of every other part of the body, being under such strong spasmodic action, the natural consequence being extreme congestion of the brain and lungs.

On making inquiries of the father, who was present when the medicine was taken, it appears, that no sooner was the liquid swallowed, than the poor girl, who had been previously sitting, started up, throwing her hands over her head, uttering at the same time a loud noise, stood still for a second, and then running forwards for a short distance with great violence, fell with her head first to the ground, after which she never moved, but continued to make a sort of moaning sound for five minutes after falling; the time elapsing, however, between the taking of the medicine and death being twenty minutes.

At ninety hours after death, or nearly four days, the body was examined, and the following were the appearances presented:—*Externally*: the body fat, and, from the congested countenance and clenched teeth, having the appearance of a person who had died from asphyxia; odour of prussic acid not perceptible on applying the nose to the mouth. *Head*: the dura mater and sinuses much congested, and the whole substance of the brain dotted with blood, which was fluid, and exceedingly black; the ventricles empty, no odour perceptible. *Thorax*: lungs much congested, otherwise healthy; heart small, and of feeble power; the right ventricle slightly dilated; valves healthy, and the whole organ loaded with dark fluid blood. The smell of prussic acid was immediately recognised on opening this cavity, as well as the abdomen. *Abdomen*: the stomach contained about two ounces of undigested food with fluid, smelling strongly of prussic acid, the organ itself appearing healthy, with the exception of a small patch at the cardiac end, which was red and vascular. I am inclined, however, to think such was not the effect of poison, but that it had existed for some time previous, it being for dyspepsia that the patient was taking medicine. *Liver*: healthy, and not tinged blue, neither was the gall-bladder; all the other organs perfectly sound.

The contents of the stomach being taken to Dr. Letheby, of the London Hospital, the poison was distinctly recognised by the usual tests; as, however, the tests are so well known, it is not necessary to mention them in detail. It was also ascertained that the bottle originally contained three grains and a half of pure acid; consequently, as the bottle was directed to be taken in four doses, the patient must have taken nearly nine-tenths of a grain of pure acid.

From the many deaths that, of late, have been caused by this poison, the above case appears to me to be one of great interest in many points; in the first place, as clearly showing how instantaneous the poison is in its action (even in so small a dose,) producing such strong tetanic spasm of the muscles, that the person is directly deprived of speech, from the perfect inability to produce inspiration; and also, that the loud gasping sound which is in the first instance made, is evidently the result of the person's efforts to get air into the lungs, by overcoming the spasm of the muscles of the chest. In fact, from the father's description, I should imagine that the first sound uttered would be very similar to that made in laryngismus stridulus, or any spasmodic affection of the trachea. It is also of interest, as proving the assertion of medi-

cal men to be correct, as to the quantity necessary to cause death; for in this case it is proved beyond doubt, that the patient died from a dose not exceeding nine-tenths of a grain, or eighteen minims of Scheele's acid.

By way of conclusion, I should wish briefly to state the cause of the mixture containing so large a quantity as three grains and a half, which was as follows:—The girl had been suffering from dyspepsia, as also from an eruption on her leg, for which she had two bottles of medicine sent her, one being a mixture, and the other a lotion; by some mishap, however, the bottles were wrongly labelled, by which error the lotion was taken instead of the mixture, giving rise to this melancholy case. In making the above communication, I have endeavoured not to overlook any point of interest, and in doing so, I have taken especial care to mention no symptom or appearance that I was not a witness to.

Newington Butts, June, 1845.

P.S.—On reading the above case, it will be said, that there is no mention made as to whether the breath smelt of prussic acid while the patient was alive; but, to say the truth, in the hurry to resort to remedies, that point was quite overlooked.

(A second report of Mr. Hicks' case.)

CASE OF POISONING BY PRUSSIC ACID.

By H. LETHEBY, Esq., M.B., Lecturer on Chemistry at the London Hospital.

THROUGH the kindness of my friend Mr. Watson, I am put in possession of the particulars of the following case of poisoning by hydrocyanic acid. It presents many points of interest to the medical jurist, inasmuch as it exhibits the effects which have arisen from one grain of absolute prussic acid, diluted with one ounce of water.

H. L.—, a young Jewess, aged twenty-two, short and deformed, but enjoying good health, had latterly complained of a slight pain in the left side, and was suffering from the effects of chilblains. For both of these she consulted her medical attendant, who, on Good Friday last, prescribed a mixture and a four-ounce lotion for her; the latter I found, upon analysis, had contained four grains of pure prussic acid. By some mistake, the directions upon the bottles were reversed, so that the lotion bore a label, directing that a fourth part should be taken twice a day. Accordingly, on receiving the medicines, one ounce of the lotion, a dose equivalent to one grain of pure acid, was administered. It was drank while the patient was seated in a chair, but she instantly jumped up, ran the distance of a few feet, and then fell to the ground insensible. She was here violently convulsed, the muscles of the face becoming distorted, and the limbs extended and fixed in tetanic spasm. She was now carried to her bed, where she was seen five minutes after by Mr. Watson, who found her lying upon her back, with the body bent somewhat forwards, and the limbs still extended and inflexible, the face swollen and turgid, the lower jaw spasmodically fixed, the eyelids half-closed, but the eye prominent and glistening, with its pupil strongly dilated. She was foaming at the mouth, breathing, at long intervals, with a deep, inspiratory effort, and uttering a moaning noise. No pulse could be felt at the wrist, though the heart continued to beat with a slow, feeble action. Every means were used to restore her, but without effect, for she died quietly without any further struggle, just fifteen minutes from the time of her taking the medicine.

On the following Tuesday (that is, four days after death) the body was examined, and the limbs were then observed to be still rigidly extended, the fingers strongly clenched, as if from spasm or convulsion, the countenance turgid and distorted, with the jaws fixed, the eyelids half open, and the eyes still glassy and bright.

Upon opening the head, the vessels upon the surface of the brain were found to be highly congested, and full of black fluid blood. The chest, directly it was cut into, evolved a strong odour of prussic acid, and this was still more marked in the fluid contained in the pericardium: it was distinctly noticed by Messrs. Watson, Waterworth, and Hicks; the former also, whose sense of smell is not very acute, observed that peculiar sensation which hydrocyanic acid occasions at the back of the throat.

The lungs were extremely congested, but otherwise quite free from disease. The heart was remarkably small, and gorged upon the right side with dark fluid blood; its valves were perfectly healthy.

The stomach contained two ounces of a thick whitish fluid, apparently composed of biscuit and water. Neither of the three gentlemen whom I have named could detect any odour of prussic acid, but it was evident to myself, even on the following day. On subjecting it, however, to a chemical analysis, I could but barely recognise the presence of this poison. The interior of the stomach presented those marks of ecchymoses which I have noticed and described in my three former cases. The liver was

healthy, and nothing abnormal could be detected about the gall-bladder or its contents. The other viscera also were natural.

Upon inquiry, I find that deceased did not speak after taking the poison. She was not sick; neither were the fæces or urine passed; nor did she scream. These appear to me to be points worthy of especial consideration. The other important features of the case are, that the dose which occasioned death was one grain, that it killed in fifteen minutes, producing immediate insensibility, convulsions, tetanic spasm, a deep and slow respiration, accompanied by a moaning noise, the pulsation of the heart was slow and feeble, there was foaming at the mouth, a turgid distorted countenance, a glassy eye, and a dilated pupil. The post-mortem appearances were such as I have always observed—namely, a congested state of the lungs, the right side of the heart full, and the blood black and fluid, ecchymoses in the stomach, and an odour of prussic acid in the tissues and blood. In this case, the stomach was nearly empty, and it might have had something to do with the rapid action of the poison, and the circumstance of its being almost entirely removed from that organ, for it was detected more by its odour than by chemical reactions.

Tredegar-square, April 1st, 1845.

DELIVERY BY INSTRUMENT, ACCOMPANIED BY SEVERE HÆMORRHAGE.

By JOHN COVENTRY, Esq., Surgeon, Broad Oak, Essex.

JUNE 24th, ten A.M., I was summoned to Sophia R—, in her twelfth labour. The child, I was informed, had been motionless since a fright sustained by the mother a few days back. Rupture of the membranes, and escape of liquor amnii previous to my arrival. On a vaginal examination, the os uteri was found to lie high up above the brim, and scarcely admitting the tip of the little finger.—Two P.M. Dilating pains now proceeded, strong, but brief and irregular; the presentation was readily detectable, by feeling the acromion and spine of the scapula, "shoulder presentation." Manual dilatation was therefore gradually attempted, and steadily persevered in, for an hour and a half; the firm, close contraction of the uterus around its contents, and the more than complete occupancy of the pelvic brim, precluded the accomplishment of version. A coil of umbilical cord now prolapsed, and was borne down by the presenting shoulder; the cord was returned, and, with the next pain, the child's right hand met the fingers of the accoucheur. The cord appeared perfectly pulsationless. Owing to the extremely disadvantageous direction of the fetus, rectification of position was equally unaccomplishable with version. Two modes of procedure were then suggested, the one, negative, doubtful, and scarcely justifiable, (in mature gestation,) "spontaneous evolution," and "ex visceration;" the latter was at once decided upon.*—Seven P.M. I solicited the professional co-operation of my experienced colleague, Mr. S. T. Parker, (Hatfield,) who arrived at ten P.M. Mr. Parker's diagnosis of the presentation and view of treatment perfectly agreeing with mine, embryotomy was at once decided upon.

The liquor amnii had now been off twelve hours, the tone of the uterus and of the system generally was still vigorous, and there was every indication of that normal excitement, so well and so favourably known to practical accoucheurs, forming, perhaps, the grand desideratum to the success of all obstetrical operations, and most strikingly contrasting with that "excitement of prostration" too often present in cases where the practitioner is called in but to witness, or unavoidably hasten, the wretched sequel, not to nature's midwifery, but "midwives' manipulation," or equally fatal protraction and delay.

The head being quite out of reach, the child also (so at least foregoing facts strongly suggest) being dead, the presenting member was drawn down, and removed at the shoulder joint, the perforator then introduced into the thorax, and the viscera removed, together with the ribs and sternum, in a fragmentary state. The abdomen was then vacated of its contents. Still, so intricate and complete was the transposition, so entirely *à tort et à travers*, that the feet could not be reached without unjustifiably forcible efforts. The spinal column was therefore carefully divided by the perforator, about its centre, the instrument being introduced between the spinous processes. The lower half of the body was then easily delivered by the feet, and the upper portion, including the neck and head, by the upper half of the spine.

Acting upon the invaluable obstetric adage, *sat cito si sat tute*,

* A strange notion of Dr. Denman's views on the subject of spontaneous evolution pervades, pretty generally, the minds of foreign accoucheurs. This philosophic obstetrician dwells at some length on the casual occurrence of spontaneous evolution in presentations of the superior extremities, but nowhere urges it as a rule of practice. The opposite affirmation has just been published by M. Moreau—*vid.* "Moreau's Treatise on Midwifery," Belton and Goddard's edition, Philadelphia; and Dr. Denman's "Vindication from the Charge." British and Foreign Medical Review, April, 1845.